

# **FY 2013 Budget Overview**

## **Congressional Cleanup Caucus**

David Huizenga  
Senior Advisor for Environmental  
Management

February 16, 2012

# Enhancing Nuclear Security through Defense, Nonproliferation, and Environmental Efforts

- The mission of the DOE Office of Environmental Management (EM) is to complete the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development and government-sponsored nuclear energy research.
- EM's work supports DOE Strategic Goal #3: "Enhance nuclear security through defense, nonproliferation, and environmental efforts."
- The President's FY 2013 Budget will position EM to achieve major accomplishments in all areas of the cleanup mission.



# EM Mission

*“Complete the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development, production, and Government-sponsored nuclear energy research”*



- From a legacy of weapons production to the world's largest environmental cleanup program
- Operating in the world's most complex regulatory environment
- EM clean-up enables DOE to maintain ongoing operations and other critical missions (NNSA/SC) while achieving compliance with governing environmental laws

# Progress to Date and Challenges Ahead

- In 1989, cleanup was required at **107 sites** with a total area of **3,125 square miles** across **35 states**.
- At the end of FY 2011, the remaining cleanup covers **17 sites** with a total area of **318 square miles** across **11 states**.
- The program's toughest challenges are still ahead, including processing liquid tank waste and deactivating and decommissioning a large number of facilities.
- These challenges require innovative technical solutions and scientific approaches.



EM cleanup sites as of the end of FY 2011

# EM Cleanup Accomplishments

---

- Tank waste stabilization and cleanup have been initiated
  - Goal - treatment of HLW through the completion of three major tank waste facilities
- Transuranic waste dispositioned – over 85,000 cubic meters through 2011
  - Goal - disposition of 90% of legacy TRU waste
- Since 2009 reduced the EM footprint by 66% representing over 600 square miles
  - Goal - shrink the EM legacy footprint 90% by 2015



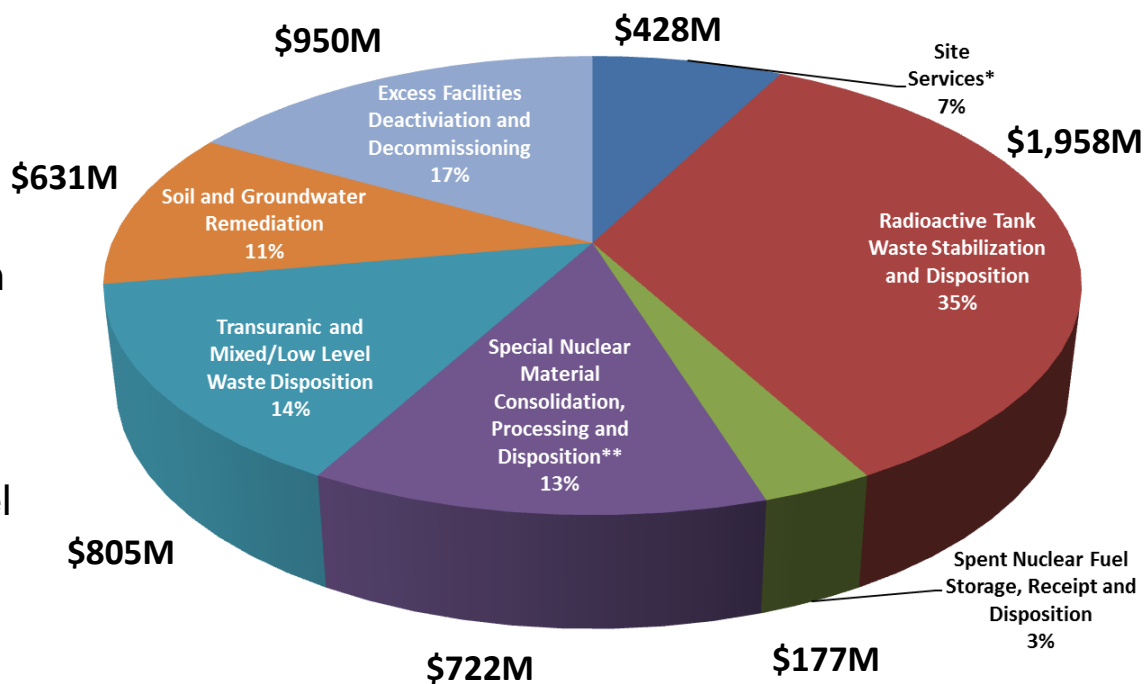
*The Waste Isolation Pilot Plant near Carlsbad, NM*

# EM Program Priorities

Maintain a safe, secure, and compliant posture in the EM complex

- Radioactive tank waste stabilization, treatment, and disposal
- Spent (used) nuclear fuel storage, receipt, and disposition
- Special nuclear material consolidation, processing, and disposition
- Transuranic and mixed/low-level waste disposition
- Soil and groundwater remediation
- Excess facilities deactivation and decommissioning (D&D)

## FY 2013 Budget Request - \$5.65B

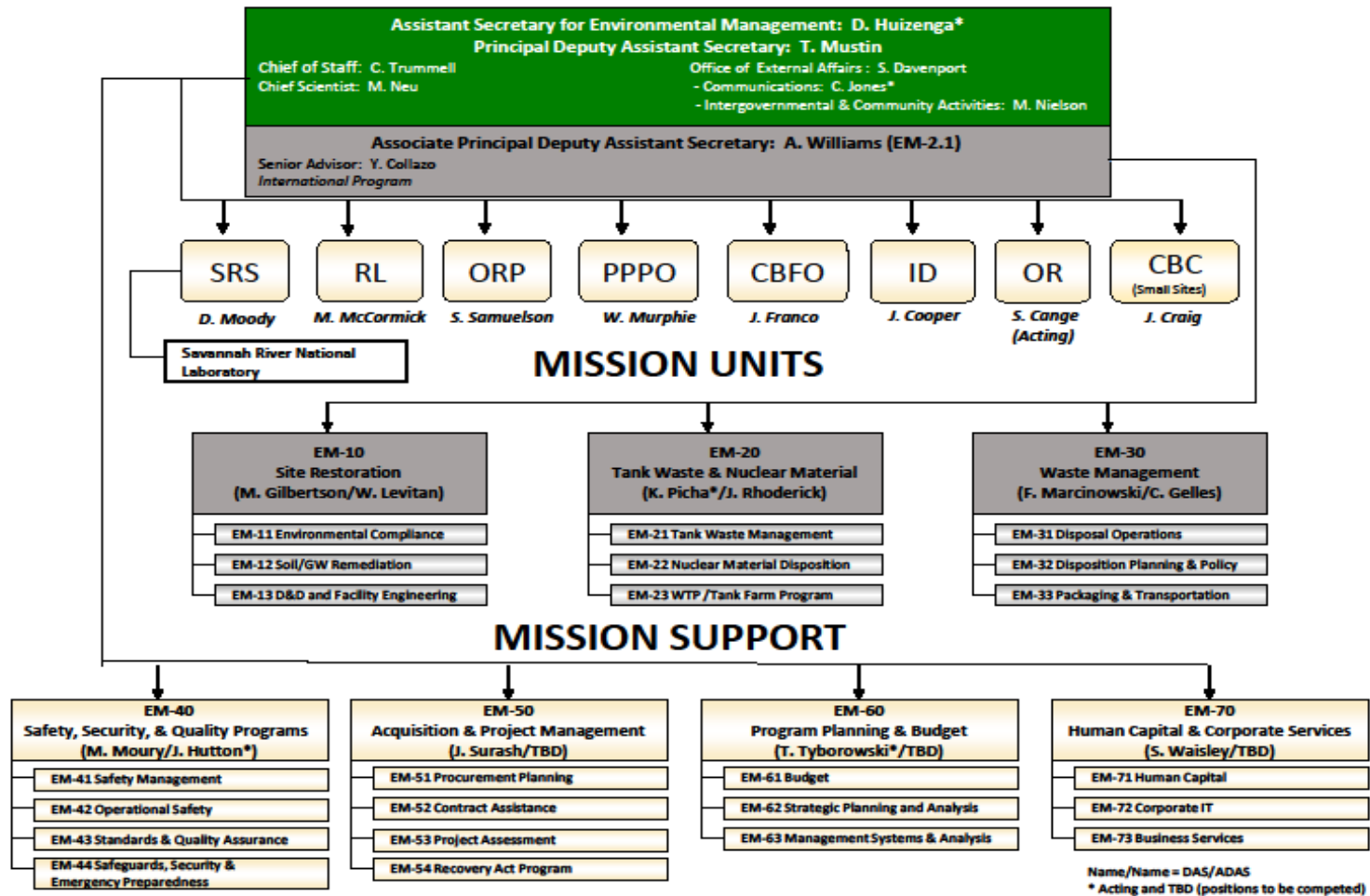


\* Includes Program Direction, Program Support, TDD, Post Closure Administration and Community and Regulatory Support

\*\* Includes Safeguards and Security



# EM Organization



# EM Cleanup Approach

---

- Conduct quality work in a safe and secure manner while protecting workers, communities and the environment
- Perform strategic reviews of site cleanup approaches to ensure maximum return on taxpayer investment
- Focus technology development and deployment investments on near-term solutions to address our most challenging problems
- Prioritize work based on risk and compliance
- Improve contract and project management



*Transuranic waste being shipped for permanent disposal*



# FY 2013 Programmatic Highlights and Planned Accomplishments

The FY 2013 budget will support major cleanup accomplishments in all areas of EM's cleanup mission:

## Across the Complex

- **Tank Waste:** Close 2 High Level Waste tanks
- **Nuclear Materials:** Package over 20,000 metric tons of depleted and other uranium
- **Soil and Groundwater:** Complete remediation on over 100 release sites
- **Solid Waste:** Disposition over 9,000 cubic meters of transuranic waste from inventory
- **Excess Facilities:** Deactivate and decommission over 75 facilities



Installation of a groundwater treatment system at the Hanford site

## At Individual EM Sites

- **Hanford – Richland (WA):** Complete removal and/or remedial actions for thirteen high risk facilities in the site's 300 Area
- **Hanford – River Protection (WA):** Continue construction of Waste Treatment Plant and perform critical tank farm infrastructure upgrades
- **Idaho (ID):** Complete treatment of all 900,000 gallons of liquid tank waste
- **Los Alamos (NM):** Complete disposal of 1,800 cubic meters of above-ground transuranic waste
- **Moab (UT):** Dispose of nearly 650,000 tons of radioactive mill tailings
- **Oak Ridge (TN):** Perform facility deactivation and decommissioning in support of the planned 2015 completion of the K-25 facility
- **Paducah/Portsmouth (KY/OH):** Continue deactivation and decommissioning of facilities and systems
- **Savannah River (SC):** Complete disposition of the site's contact-handled legacy transuranic waste

# Compliance Status

EM has 123 major enforceable milestones due in FY 2013 and this request positions EM to meet those milestones.

Notable planned accomplishments include:

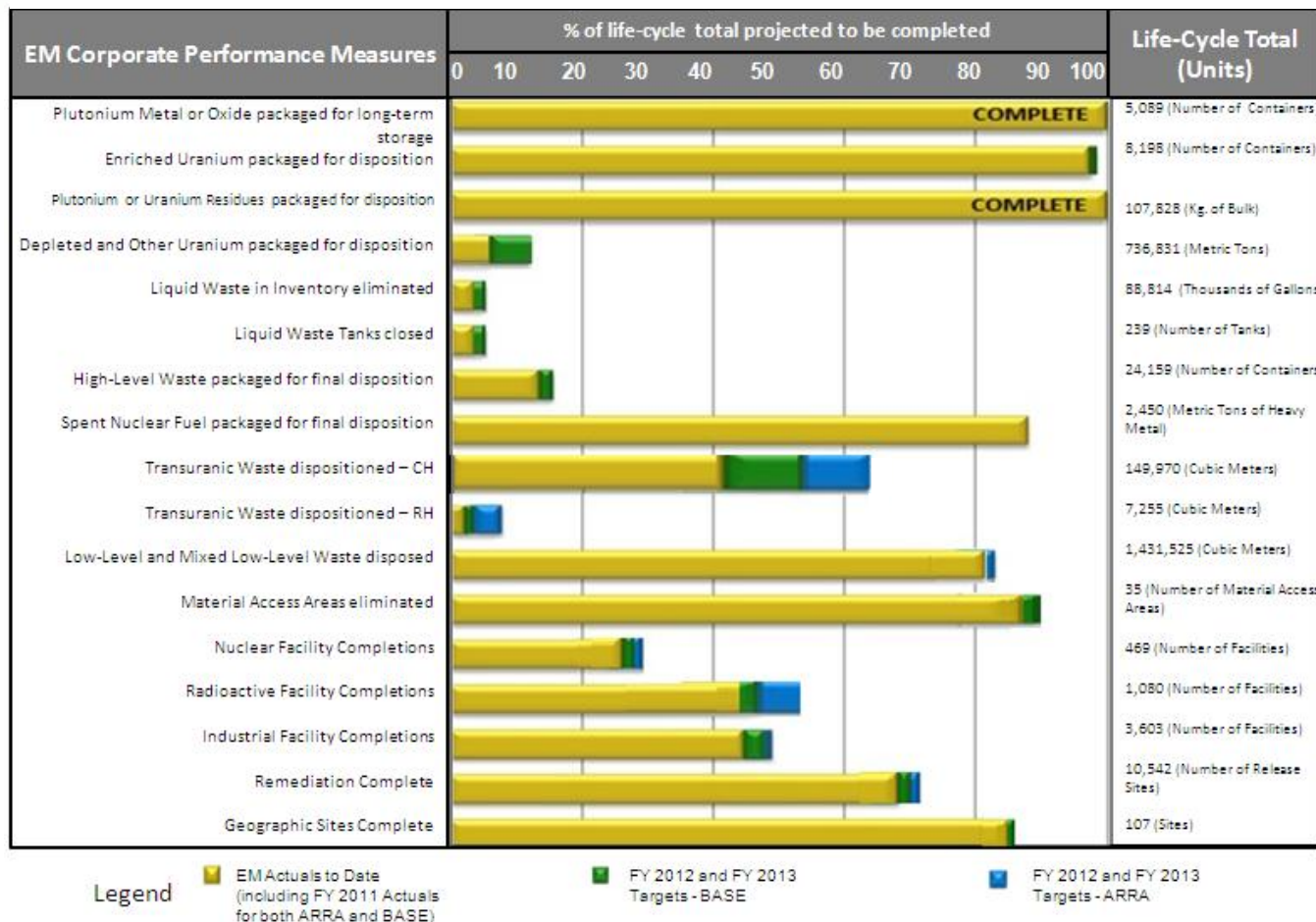
- Complete the closure, including waste removal and final grouting, of high-level-waste tanks 18 and 19 in the Savannah River Site's F-Tank Farm
- Complete all interim response actions in the 100 Area of the Hanford Reservation, the portion of the site that borders the Columbia River, except the 100 K Area
- Complete remediation actions for the Los Alamos Town Sites
- Complete all slab and soil-related remedial actions in the northwest quadrant of the Oak Ridge National Laboratory



*Hanford's 300 area before and after cleanup*

# Corporate Performance Measure Status

## Completions through FY 2013



- Performance measures comprehensively track **cleanup progress**.
- Two performance measures are complete and five additional measures are over 80% complete.
- EM has made **substantial risk reduction progress** by stabilizing and consolidating special nuclear material.
- With investments in FY 2012 and FY 2013, EM will make **significant progress** on high level waste, transuranic waste shipments, and facility completions.

# Funding by Site

*Dollars in thousands*

| Site                    | FY 2011 Operating Plan | FY 2012 Current Enacted | FY 2013 Cong. Request |
|-------------------------|------------------------|-------------------------|-----------------------|
| Brookhaven              | 13,833                 | 9,585                   | 7,840                 |
| ETEC                    | 6,466                  | 9,279                   | 9,460                 |
| Hanford                 | 1,040,248              | 1,021,824               | 1,037,773             |
| Idaho                   | 403,448                | 389,800                 | 405,397               |
| Los Alamos              | 191,800                | 188,561                 | 239,143               |
| Lawrence Livermore      | 822                    | 873                     | 1,484                 |
| Moab                    | 32,594                 | 31,000                  | 30,941                |
| Nevada                  | 62,510                 | 65,545                  | 64,641                |
| Oak Ridge               | 401,142                | 419,758                 | 421,250               |
| River Protection        | 1,134,197              | 1,181,800               | 1,172,113             |
| Paducah                 | 144,370                | 143,082                 | 142,479               |
| Portsmouth              | 257,604                | 254,527                 | 186,672               |
| Savannah River          | 1,300,022              | 1,316,922               | 1,303,493             |
| SPRU                    | 50,895                 | 24,000                  | 24,000                |
| SLAC                    | 7,711                  | 2,435                   | 3,800                 |
| Sandia                  | 3,014                  | 3,014                   | 5,000                 |
| WIPP                    | 220,006                | 218,179                 | 202,987               |
| West Valley             | 59,588                 | 66,300                  | 49,877                |
| Other                   | 175                    | 14,703                  | 1,990                 |
| Program Direction       | 320,007                | 321,628                 | 323,504               |
| Program Support         | 21,101                 | 20,380                  | 18,279                |
| TD&D                    | 18,869                 | 10,622                  | 20,000                |
| D&D Fund Deposit        | 33,633                 | -                       | 463,000               |
| Subtotal, EM            | 5,724,055              | 5,713,817               | 6,135,123             |
| D&D Fund Deposit Offset | (33,633)               | -                       | (463,000)             |
| Offsets                 | (22,700)               | (3,381)                 | (22,123)              |
| <b>Total, EM</b>        | <b>5,667,722</b>       | <b>5,710,436</b>        | <b>5,650,000</b>      |

*Safeguard and Security allocated across sites*

# Funding by State

*Dollars in thousands*

| State            | FY 2011 Operating Plan | FY 2012 Current Enacted | FY 2013 Cong. Request | Percent of Total |
|------------------|------------------------|-------------------------|-----------------------|------------------|
| California       | 14,999                 | 12,587                  | 14,744                | 0.3%             |
| Colorado         | 175                    | 4,703                   | 1,990                 | 0.0%             |
| Idaho            | 414,639                | 401,011                 | 413,169               | 7.3%             |
| Kentucky         | 154,678                | 154,107                 | 153,498               | 2.7%             |
| Nevada           | 66,127                 | 69,366                  | 68,655                | 1.2%             |
| New Mexico       | 428,781                | 425,515                 | 462,118               | 8.1%             |
| New York         | 124,316                | 99,885                  | 81,717                | 1.4%             |
| Ohio             | 301,885                | 295,308                 | 227,980               | 4.0%             |
| South Carolina   | 1,349,693              | 1,368,849               | 1,353,576             | 23.9%            |
| Tennessee        | 416,258                | 435,918                 | 437,764               | 7.7%             |
| Utah             | 32,594                 | 31,000                  | 30,941                | 0.5%             |
| Washington       | 2,253,193              | 2,281,003               | 2,287,757             | 40.3%            |
| Other*           | 133,084                | 134,565                 | 138,214               | 2.4%             |
| Subtotal, EM     | 5,690,422              | 5,713,817               | 5,672,123             | 100%             |
| Offsets          | (22,700)               | (3,381)                 | (22,123)              |                  |
| <b>Total, EM</b> | <b>5,667,722</b>       | <b>5,710,436</b>        | <b>5,650,000</b>      |                  |

\* Includes Headquarters Program Direction, Program Support, Technology Development, and DOE-sponsored Facilities (per P.L. 112-74)

# EM's Near-term Activities for Spent (Used) Nuclear Fuel and High-Level Waste

---

- EM remains focused on near term to address the highest risk activities, by continuing the retrieval and treatment of its tank waste inventories.
- Sites are focused on stabilization and safe storage of high-level waste and spent nuclear fuel until disposal.
  - Over 3,500 High-Level Waste (HLW) canisters have been produced and are in safe interim storage.
  - Vulnerable fuels have been conditioned and packaged, and EM-owned fuel inventories have been consolidated to optimize storage, reduce risks and reduce costs.
  - Existing storage facilities can be safely used for several decades, and possibly longer, depending on need and reevaluation of safety basis.



# EM's Near-term Activities for Spent (Used) Nuclear Fuel and High-Level Waste

- EM remains committed to fulfilling the compliance commitments regarding disposition of HLW and Spent Nuclear Fuel (SNF)
- EM is actively supporting the Department's efforts to evaluate the recommendations of the Blue Ribbon Commission (BRC)

## SNF/HLW at EM Sites

### •Hanford

SNF ~2130mthm  
HLW 194M curies;  
53M gallons in 177 tanks

### •Idaho

SNF ~280 mthm  
HLW 37M curies  
(calcine only)

### •Fort St. Vrain, CO

SNF ~15 mthm

### •Savannah River Site

SNF ~30 mthm  
HLW 416 M curies  
33M gallons in 51 tanks

# EM: A National Responsibility

- Time is not on our side – costs and risks increase over time.
- We have a responsibility to relieve future generations of this environmental and financial liability.
- We have delivered significant cleanup progress in the past several years.

*K-25 East Wing  
Demolition at Oak  
Ridge, TN*

